Preface

The 2nd International Conference on Advances in Technologies and Applications for Sustainability (ICATAS 2024), organised by Mohan Babu University, Tirupati, India, on 21–22 December 2024, served as a vibrant platform where scholars, researchers, practitioners, and industry experts came together to deliberate on the role of science, engineering, and technology in shaping a sustainable future.

This conference was envisioned to provide a premier interdisciplinary forum to discuss recent innovations, address pressing challenges, and share practical solutions aligned with the United Nations' Sustainable Development Goals (SDGs). The deliberations reflected the diverse yet interconnected dimensions of sustainability, spanning sustainable engineering, energy, environment, materials science, digital transformation, and societal well-being.

The proceedings of ICATAS 2024, now published by Pertanika, encapsulate the scholarly contributions presented during the conference. The selected works not only highlight theoretical advancements but also emphasise real-world applications, providing pathways to achieve balance between technological growth and environmental responsibility. This special issue thus stands as a testimony to the collective intellectual effort directed towards sustainability, demonstrating how innovations can be harnessed for long-term societal and ecological benefits.

We are deeply grateful to the team members of Universiti Putra Malaysia's Pertanika Journal of Science and Technology for their unwavering support in realising this publication. Our sincere appreciation is also extended to the management of Mohan Babu University, chief patrons, patrons, advisors, reviewers, session chairs, and all committee members whose dedicated efforts ensured the success of ICATAS 2024. Above all, we thank our contributors and participants from across the globe for bringing diverse perspectives and for making this conference a truly enriching experience.

It is our hope that this special issue will inspire researchers, academics, and practitioners to explore novel directions and foster collaborations that contribute to a more sustainable and equitable world.

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